

COMMONWEALTH OF VIRGINIA
STATE CORPORATION COMMISSION

STAFF REPORT PRESENTING PROPOSED RULES FOR
COMPETITIVE ELECTRICITY METERING

EX PARTE: In the matter of establishing rules and regulations pursuant to the
Virginia Electric Utility Restructuring Act for competitive metering services

CASE NO. PUE010298

Division of Energy Regulation

February 14, 2002

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Introduction and Background

Legislative Background

The Virginia Electric Utility Restructuring Act (§ 56-577 et seq. of the Code of Virginia) (“the Act”), as amended by the 2001 General Assembly, directs the State Corporation Commission (“Commission”) to promulgate certain rules and regulations as may be necessary to implement various provisions of the Act, including the provision of competitive metering services. Section 56-581.1 E of the Act states that the Commission shall implement the provision of competitive metering services by licensed providers for large industrial and large commercial customers of investor-owned distributors on January 1, 2002, and may approve such services for residential and small business customers of investor-owned distributors on or after January 1, 2003, as determined to be in the public interest by the Commission. Such implementation and approvals must consider the nine statutory implementation criteria set forth in § 56-581.1 E of the Act. Upon the reasonable request of a distributor, the Commission shall delay the provision of competitive metering service in such distributor’s service territory until January 1, 2003, for large industrial and large commercial customers, and after January 1, 2004, for residential and small business customers. Section 56-581.1 F of the Act directs the Commission to promulgate rules and regulations as may be necessary to implement the authorization related to competitive metering services provided

for in § 56-581.1 E. Sections 56-581.1 E and 56-581.1 F of the Code of Virginia are provided in Appendix A of this report.

Order to File Intended Schedules and Interim Staff Report

In its Order dated May 15, 2001, the Commission established this proceeding, Case No. PUE010298, to promulgate rules for competitive metering services. The Commission directed investor-owned distribution utilities to file by May 30, 2001, their intended schedules for implementing competitive metering services. The Commission directed the Staff to investigate, with input from a work group, and file an interim report by July 16, 2001, presenting recommendations on further procedures for promulgating proposed rules for competitive metering services. Summaries of (1) the utilities' proposed implementation schedules and (2) the Staff's investigation, with input from the work group, and interim report are provided in the following two sections.

Utilities' Intended Schedules

Three of the four investor-owned electric distribution utilities beginning full or phased-in retail access in Virginia on January 1, 2002 – Delmarva Power & Light Company (“Delmarva”), Virginia Electric and Power Company (“Dominion Virginia Power”), and The Potomac Edison Company, d/b/a Allegheny Power (“AP”) – requested a delay in implementing competitive metering within their respective distribution service territories until January 1, 2003, for large industrial and large commercial customers, and after January 1, 2004, for residential and small business customers. Appalachian Power Company, d/b/a American Electric

Power (“AEP-VA”) initially filed a notice of intent to begin the implementation of competitive metering on January 1, 2002, for large industrial and large commercial customers, and on or after January 1, 2003, for residential and small business customers. Subsequently, on July 3, 2001, AEP-VA notified the Commission that it “will not press for the issuance of competitive metering rules by January 1, 2002.” However, AEP-VA requested that the Commission not foreclose the possibility that early entrants into the competitive metering market could be accommodated under the Company’s existing tariffs. Kentucky Utilities Company, d/b/a Old Dominion Power Company (“ODP”), which will transition to retail choice in its Virginia service territory on or before January 1, 2004, requested a delay in the implementation of competitive metering services in its Virginia service territory until after January 1, 2004.

Staff’s Investigation, Work Group Input, and Interim Report

As mentioned previously, the Commission’s Order of May 15, 2001, in addition to requiring utilities to file their intended schedules, also directed the Staff to investigate, with input from a work group, and file an interim report by July 16, 2001, presenting recommendations on further procedures for promulgating proposed rules for competitive metering services. In light of the uncertainties surrounding competitive metering, the Commission encouraged the Staff and the work group to consider the feasibility and appropriateness of an approach that provides a reasonable level of flexibility for experimentation. The competitive metering work group met on three occasions during the summer of

2001. In the Commission's Order Establishing Proceedings for Case Nos. PUE010296, PUE010297, and PUE010298, interested parties were notified of the work group meetings and invited to attend. The work group focused on assisting the Staff in developing and providing a recommendation to the Commission regarding an appropriate process for implementing competitive metering. In its deliberations, the work group considered the requirements of the Act, Virginia's retail access business model and the contribution of metering to the operation of that market, the current state of industry restructuring in the Commonwealth, and the current status of competitive metering regionally and nationally.

In order to assist the Staff in developing a recommendation regarding further procedures for promulgating proposed rules, the work group discussed and generally agreed to a measured approach to competitive metering. The work group participants generally agreed that a measured approach, initially ensuring the provision of data access, would serve the public interest and contribute to the goal of facilitating the development of effective competition in electric service for all customer classes. Timely access to interval or near real-time meter data is critical to the development of a competitive retail electricity market. This type of data access and availability will allow competitive service providers to deliver improved pricing signals which will provide customers with necessary information and proper incentives to adjust consumption patterns and, accordingly, help competitive service providers manage risk in procuring energy.

In its July 16, 2001, interim report, the Staff noted that one approach to the development of a competitive metering market is through immediate and complete unbundling of physical meter services and meter data management services. However, complete unbundling would involve substantial time to develop the appropriate business rules, and the implementation of unbundled competitive metering services would be expensive given the infancy of the market and the lack of uniform business practices that are needed to achieve economies of scale. In addition, attempts in other states to fully unbundle all utility metering service functions has generated little participation to date. A slower, measured approach appears to be a more prudent step at this time. The measured approach advocated by the Staff and the majority of the work group does not preclude the eventual inclusion of any particular element of metering services from being part of the competitive retail market. Finally, the Staff believes that this measured approach is consistent with Virginia law.

In its July 16, 2001, interim report, the Staff recommended that (1) competitive metering should initially provide meter data availability and access choices, including access to meter data on a near real-time basis by January 1, 2003; (2) the Staff, with input from the work group, should submit a draft of the proposed rules by February 14, 2002, relative to meter data availability and access choices; and (3) upon implementation of such rules, the Staff and work group should continue to meet and conduct an ongoing examination of the competitive

metering markets and make recommendations regarding additional competitive metering market elements.

Comments on Utilities' Intended Schedules and Staff's Interim Report

On August 3, 2001, the Commission issued an order inviting comments by August 21, 2001, on both the utilities' intended schedules and the Staff's interim report. Eight parties from the service list filed comments on the utilities' intended schedules and Staff's interim report: the Division of Consumer Counsel in the Attorney General's Office, three utilities (AEP-VA, AP, and Dominion Virginia Power), two suppliers (AES NewEnergy and The New Power Co.), the Virginia Committee for Fair Utility Rates and the Old Dominion Committee for Fair Utility Rates ("Industrial Committees"), and the National Energy Marketers Association ("NEM").

Few substantial objections were raised to the Staff's recommendation that competitive metering be implemented beginning January 1, 2003, with meter data availability and access choices. The Industrial Committees recommended the Commission take all necessary steps to allow utilities to use their existing tariffs to accommodate early entrants into the competitive metering market between January 1, 2002, and January 1, 2003. On a separate matter, Dominion Virginia Power urged the Commission specifically to include customer meter ownership as part of the initial implementation of competitive metering for large customers on January 1, 2003, and to establish a target date of January 1, 2004, for the competitive provision of all metering services to large customers, with the

Commission having the flexibility to adjust this schedule due to changing market conditions. The Industrial Committees did not specifically oppose an initial implementation of only certain elements of competitive metering, but favored a more compressed schedule. NEM urged the Commission to immediately unbundle the fully embedded monopoly costs associated with metering.

Commission's December 21, 2001 Order on Electricity Metering Issues

The Commission found it appropriate to grant the requests of Delmarva, Dominion Virginia Power, and AP to delay implementation of competitive metering in their respective service territories until January 1, 2003, for large industrial and large commercial customers, but premature to rule on requests to delay the implementation of competitive metering for residential and small business customers. The Commission recognized that the issues surrounding competitive metering are complex and controversial, and there had not been adequate time to fully develop rules in a fashion timely enough to allow utilities to put into operation the processes and systems needed to implement competitive metering services by January 1, 2002. In addition, the Commission noted that little or no competitive metering activity has developed in other states in which competitive metering has been authorized. The Commission opined that a one-year delay in the implementation of competitive metering would help avoid confusion in the marketplace and facilitate a more orderly transition to retail access.

The Commission agreed with the Staff that the availability and accessibility of meter data by customers and competitive service providers may be the elements of metering services most critical to advancing the development of a competitive electricity market in Virginia. Therefore, the Commission adopted the Staff's recommendation and directed the Staff to proceed, with the assistance of the work group, to develop and propose rules by February 14, 2002, that provide customers and competitive service providers with reasonable options regarding meter data availability and accessibility.

The comments of Dominion Virginia Power and certain other interested parties included recommendations for implementation of additional competitive metering elements on January 1, 2003. The Commission referred consideration and evaluation of such additional elements of competitive metering services to the Staff, with the assistance of the work group, and directed that such evaluations carefully consider the nine statutory implementation criteria set forth in § 56-581.1 E of the Code of Virginia. The Commission also directed the Staff to file a report by June 30, 2002, providing the status of its evaluations and recommendations for additional implementation efforts. The Commission also encouraged the active work group participation of competitive metering and energy service providers, including the presentation of specific proposals for experimentation.

Competitive Metering in Other States

A review of competitive metering developments in other states implementing retail access demonstrates little activity toward the establishment of a robust competitive metering market as of January 1, 2002.

- Arizona: Commission approved competitive metering, including customer meter ownership; the local distribution company cannot own the meter of a direct access customer. As of August 3, 2001, the Commission had certified nine competitive generating service providers to “resell” to their customers those metering services provided by a subcontracted meter service provider (“MSP”), and had certified eight non-generating entities to provide metering services to competitive service providers. However, as of January 1, 2002, there were no direct access customers and, further, no competitive MSPs had been certified to contract directly with customers.
- Delaware: As part of the settlement agreement in the Conectiv/Pepco merger, Delmarva agreed to work in good faith with the Delaware Commission and other interested parties to initiate a pilot program for approximately 250 residential or small commercial customers that would test the appropriateness of larger-scale initiatives or offerings with respect to real-time metering or advance-pay metering, or other similar metering technologies.
- Illinois: Commission approved competitive metering January 2, 2001, and IMServ North America was approved as a licensed meter service provider on March 23, 2001, but only in Commonwealth Edison’s service territory. However, there were no customers taking MSP service as of January 1, 2002.

- Maine: Legislation revised to revoke the previously legislated deadline and to give the Commission discretion to implement competitive metering through rulemaking procedures. Commission has not set a timetable to define or implement competitive metering. Customers may request an interval meter subject to reasonable incremental costs.
- Maryland: Commission adopted a phased approach to competitive metering beginning January 1, 2002, with access to meter data on a near real-time, on-command basis and allowing large-customer or third-party ownership of the meter.
- Massachusetts: Determined that metering services should not be unbundled. Interval metering and access to data must be provided at the customer's request.
- New Hampshire: Commission determined that metering services should not be unbundled.
- New Jersey: Due to an impasse in the competitive metering work group process during 2001, the Board of Public Utilities is planning a separate formal proceeding in 2002 to consider whether to implement competitive metering. In part during the work group process, the local distribution companies refused to provide competitive service providers read-only access to the utility meter absent a formal mandate relative to competitive metering services.
- New York: Commission approved competitive metering for some large customers and issued a manual for practices and procedures on January 24,

2001; however, as of January 1, 2002, the Commission had received no applications from prospective MSPs. Six meter data service providers (“MDSPs”) have been certified to provide energy management; however, they are not certified to provide competitive meter data management services. The MDSPs are provided a data pulse but are not given read-only access to the utility meter.

- Oregon: Legislation specifies that competitive metering may be implemented at the Commission’s discretion, but no activities are underway to implement competitive metering or to allow third-party access to the billing meter.
- Pennsylvania: Commission-approved settlements with the local distribution companies recognize competitive metering; however, there were no licensed MSPs as of January 1, 2002. Customers may request interval metering and access to interval data is required.

Staff Analysis and Recommendations

The Staff developed the electricity metering rules proposed herein to initiate the implementation of competitive metering services; however, these proposed rules represent only the beginning of a measured and evolving process. The Staff believes that these proposed rules address the element of electricity metering that is most critical to facilitating the development of effective competition in electric service for all customer classes – access to interval meter data by the customer or the customer’s competitive service provider. Specifically, the proposed rules address the responsibilities of the local distribution company

relative to the provision of interval metering service, including interval data access options, to customers or their authorized competitive service provider. The proposed rules also address the right of a customer or a competitive service provider to request an evaluation of special metering functionality.

In effect, the proposed rules provide an element of electricity metering services that guarantees competitive service providers the opportunity to offer improved price signals and competitive energy management services to their customers. Additional elements of metering services would remain the responsibility of the local distribution company until such time as the Commission determines the competitive provision of such services to be in the public interest in accordance with the nine statutory implementation criteria set forth in § 56-581.1 E of the Code of Virginia. The Staff will proceed, with the assistance of the work group, to consider possible experimental pilot programs and further examine additional elements of competitive metering services, and submit a report providing its findings and recommendations for additional implementation efforts by June 30, 2002.

In developing the proposed electricity metering rules for this report, the Staff relied primarily on the guidelines of the Commission's Order of December 21, 2001, as well as input from the competitive metering work group during meetings on August 28, 2001, December 12, 2001, and February 7, 2002. Additionally, significant input was solicited and received through an iterative controlled-feedback process, in which work group members responded to a series

of electronically mailed questionnaires. Staff believes the proposed rules represent a judicious and measured approach to the implementation of competitive metering that not only recognizes the importance of data accessibility to the advancement of a competitive electricity market but also acknowledges the current reality of the absence of a robust competitive metering market anywhere in the United States.

The Staff recommends that the proposed rules for electricity metering be adopted and effective January 1, 2003, for the full or phased-in implementation of retail access to electricity supply service. The Staff also recommends that the proposed rules amend the recently approved Rules Governing Retail Access to Competitive Energy Services by deleting Rule 20 VAC 5-312-100 H in the load profiling provisions and adding similar but revised language to the electricity metering provisions in new Section 20 VAC 5-312-120. The proposed rules for electricity metering are presented below with a paragraph of explanation following each proposed rule.

20 VAC 5-312-120 A. If the local distribution company provides interval metering as the basic metering service in accordance with its applicable tariff, interval metering of a customer's load shall continue to be required if the customer purchases electricity supply service from a competitive service provider. Unless other arrangements are agreed upon between the local distribution company and the customer, the local distribution company may remove the interval meter if the customer's load deteriorates below previously established interval metering thresholds.

The intent of proposed rule 20 VAC 5-312-120 A is to ensure that a customer who receives interval metering as the basic metering service from its local distribution company ("LDC") will continue to receive such service from the

LDC even if the customer switches to a competitive service provider (“CSP”) for electricity supply service. Typically, interval metering is provided as the basic metering service to large customers whose demand (kW) is above a certain threshold. A customer that falls below such a threshold may no longer qualify for interval metering as the basic metering service.

20 VAC 5-312-120 B. Upon a customer's request, the local distribution company shall provide interval metering service to the customer at the net incremental cost above the basic metering service provided by the local distribution company. The local distribution company shall reply to the customer in writing within five business days of the request for interval metering service, acknowledging the request and identifying the prerequisites and proposed process for completing the work. The local distribution company shall complete the work within 45 calendar days, or as promptly as working conditions permit.

Proposed rule 20 VAC 5-312-120 B allows any customer to request interval metering service from the LDC; however, the customer is required to pay the net incremental cost above the basic metering service normally provided by the LDC. Interval metering service includes one or more of the following: the installation and maintenance of an interval meter or a pulse device approved by the LDC, the provision of historical edited interval data, and the provision of the current month’s edited interval data going forward on a monthly basis. The LDC is required to respond to such requests in writing, within 5 business days of receiving the request. The response should (1) acknowledge receipt of the request, (2) identify prerequisites for providing the service, such as site access, that must be resolved by the customer prior to the provision of the interval metering service, and (3) the process and expected time-line for the LDC to complete the work once all of the prerequisites have been met by the customer.

The rule requires the LDC to complete the work within 45 days of the request or as soon as working conditions permit; however, the Staff anticipates that the work in many cases will be completed much sooner. The rule’s qualifying language, “or as promptly as working conditions permit,” recognizes that completion of the work may take longer than 45 days in a few unusual cases; however, the language should not be misconstrued as a license for LDCs to delay installation of interval metering or to adversely impact the ability of a CSP to serve its customers.

20 VAC 5-312-120 C. The local distribution company shall offer each of the following options to customers or their authorized competitive service provider to access unedited interval data consistent with the local distribution

company's communication protocol: (i) read-only electronic access to the interval billing meter, (ii) receipt of a stream of data pulses proportional to energy usage, and (iii) both of the foregoing.

Proposed rule 20 VAC 5-312-120 C identifies the menu of options that the LDCs must offer their customers. While most customers will probably choose either read-only electronic access or a data pulse, some customers may want both. These options are meant to allow the customer, the customer's authorized CSP, or both the customer and the customer's authorized CSP access to unedited interval data. The LDC is required only to provide LDC-approved equipment that is consistent with the LDC's communication protocol. Initially, it is anticipated that electronic access will be provided most likely via a modem-equipped meter requiring a customer-provided dedicated telephone line; however, some LDCs may eventually provide other means of electronic access such as internet meters. To the extent any of these options cost more than the basic metering service provided by the LDC, the customer would be expected to pay the net incremental cost of providing the service.

20 VAC 5-312-120 D. The local distribution company shall read interval meters at a frequency in accordance with its applicable terms and conditions and shall store interval meter data at intervals compatible with wholesale load settlement requirements. Interval meter data may be estimated on occasion as necessary. The local distribution company shall make available to customers or their authorized competitive service provider twelve months of historical edited interval data through electronic communication medium or mail, as mutually agreed.

Proposed rule 20 VAC 5-312-120 D allows the LDCs to read interval meters in accordance with their applicable terms and conditions that have been approved by the State Corporation Commission. Normally, this would mean no less frequently than monthly; however, meters may be read more frequently and readings may be estimated on occasion as necessary. The requirement that interval meter data be stored at intervals compatible with wholesale load settlement requirements does not prevent an LDC from initially storing the data at more frequent intervals. It is anticipated that the interval meter data would be stored on the metering equipment for the duration of at least one read cycle.

The rule also intends the LDC to make available twelve months of historical edited interval data upon request to the customer, the customer's authorized CSP, or both. Normally, the data would be made available electronically by email, Internet, electronic data interchange, or other electronic communication medium depending on the capabilities of the LDC; however, the

LDC should honor requests to provide the data by regular mail if such requests are reasonable.

20 VAC 5-312-120 E. The local distribution company shall consider reasonable requests from customers or their authorized competitive service provider to evaluate special metering functionality and shall reply to the requests in writing within five business days, acknowledging the request and identifying the cost and process for completing the work. The local distribution company shall complete the work within 45 calendar days, or as promptly as working conditions permit.

The purpose of proposed rule 20 VAC 5-312-120 E is to ensure that the LDC considers reasonable requests to provide special metering functionality, such as power quality data, that may not be provided normally under the LDC's tariff but that may be within the capability of the LDC-supplied interval metering equipment. The LDC must reply to the request in writing, acknowledging the request, identifying the cost to supply the special functionality, and explaining the process and time-line for completing the work. It is expected that the work would be completed within 45 days except in rare cases with unusual circumstances.

APPENDIX A

SECTIONS 56-581.1 E AND 56-581.1 F OF THE CODE OF VIRGINIA

SECTION 56-581.1 E OF THE CODE OF VIRGINIA

The Commission shall implement the provision of competitive metering services by licensed providers for large industrial and large commercial customers of investor-owned distributors on January 1, 2002, and may approve such services for residential and small business customers of investor-owned distributors on or after January 1, 2003, as determined to be in the public interest by the Commission. Such implementation and approvals shall:

1. Be consistent with the goal of facilitating the development of effective competition in electric service for all customer classes;
2. Take into account the readiness of customers and suppliers to buy and sell such services;
3. Take into account the technological feasibility of furnishing any such services on a competitive basis;
4. Take into account whether reasonable steps have been or will be taken to educate and prepare customers for the implementation of competition for any such services;
5. Not jeopardize the safety, reliability or quality of electric service;
6. Consider the degree of control exerted over utility operations by utility customers;
7. Not adversely affect the ability of an incumbent electric utility authorized or obligated to provide electric service to customers who do not buy such services from competitors to provide electric service to such customers at reasonable rates;
8. Give due consideration to the potential effects of such determinations on utility tax collection by state and local governments in the Commonwealth; and
9. Ensure the technical and administrative readiness of a distributor to coordinate and facilitate the provision of competitive metering services for its customers.

Upon the reasonable request of a distributor, the Commission shall delay the provision of competitive metering service in such distributor's service territory until January 1, 2003, for large industrial and large commercial customers, and after January 1, 2004, for residential and small business customers.

SECTION 56-581.1 F OF THE CODE OF VIRGINIA

The Commission shall promulgate such rules and regulations as may be necessary to implement the authorization related to competitive metering services provided for in subsection E. Such rules and regulations shall include provisions regarding the licensing of persons seeking to sell, offering to sell, or selling competitive metering services, pursuant to the licensure requirements of § 56-587.

APPENDIX B

PROPOSED RULES GOVERNING ELECTRICITY METERING

VIRGINIA ADMINISTRATIVE CODE

CHAPTER 312

RULES GOVERNING RETAIL ACCESS TO COMPETITIVE ENERGY SERVICES

20 VAC 5-312-100. Load profiling.

~~H. Upon a customer's request, the local distribution company shall provide interval metering service to the customer at the net incremental cost above the basic metering service provided by the local distribution company. If the local distribution company provides interval metering as the basic metering service in accordance with its applicable tariff, interval metering of a customer's load shall continue to be required if such customer purchases electricity supply service from a competitive service provider.~~

20 VAC 5-312-120. Electricity metering.

A. If the local distribution company provides interval metering as the basic metering service in accordance with its applicable tariff, interval metering of a customer's load shall continue to be required if the customer purchases electricity supply service from a competitive service provider. Unless other arrangements are agreed upon between the local distribution company and the customer, the local distribution company may remove the interval meter if the customer's load deteriorates below previously established interval metering thresholds.

B. Upon a customer's request, the local distribution company shall provide interval metering service to the customer at the net incremental cost above the basic metering service provided by the local distribution company. The local distribution company shall reply to the customer in writing within five business days of the request for interval metering service, acknowledging the request and identifying the prerequisites and proposed process for completing the work. The local distribution company shall complete the work within 45 calendar days, or as promptly as working conditions permit.

C. The local distribution company shall offer each of the following options to customers or their authorized competitive service provider to access unedited interval data consistent with the local distribution company's communication protocol: (i) read-only electronic access to the interval billing meter, (ii) receipt of a stream of data pulses proportional to energy usage, and (iii) both of the foregoing.

D. The local distribution company shall read interval meters at a frequency in accordance with its applicable terms and conditions and shall store interval meter data at intervals compatible with wholesale load settlement requirements. Interval meter data may be estimated on occasion as necessary. The local distribution company shall make available to customers or their authorized competitive service provider twelve months of historical edited interval data through electronic communication medium or mail, as mutually agreed.

E. The local distribution company shall consider reasonable requests from customers or their authorized competitive service provider to evaluate special metering functionality and shall reply to the requests in writing within five business days, acknowledging the request and identifying the cost and process for completing the work. The local distribution company shall complete the work within 45 calendar days, or as promptly as working conditions permit.

APPENDIX C

ORGANIZATIONS REPRESENTED ON THE STAFF WORK GROUP

Organization Name

Allegheny Energy Supply
Allegheny Power
Schlumberger Resource Management Services North America
The New Power Company
Olameter, Inc.
Christian & Barton
Williams, Mullen, Clark & Dobbins, P.C.
Dominion Virginia Power
American Electric Power
AES NewEnergy, Inc.
Utiliread
Energy Consultants, Inc.
Conectiv
NCS Pearson
Virginia, Maryland & Delaware Association of Electric Cooperatives
Virginia Natural Gas, Inc./AGL Resources
Peregrine Energy
Northern Virginia Electric Cooperative